

FIG. 1 (PRIOR ART)

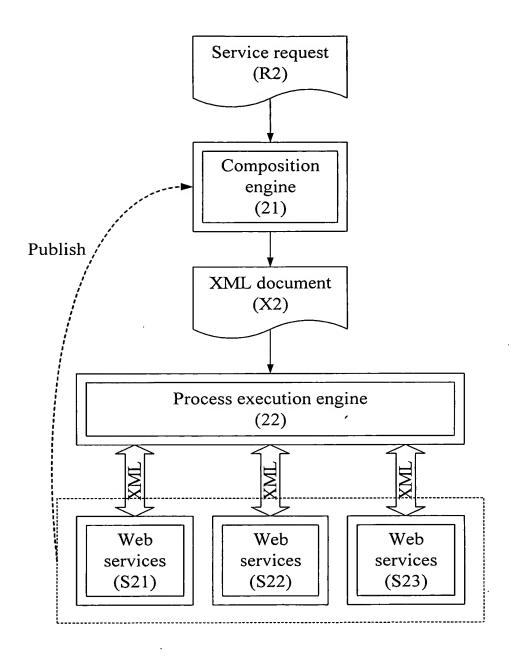


FIG. 2 (PRIOR ART)

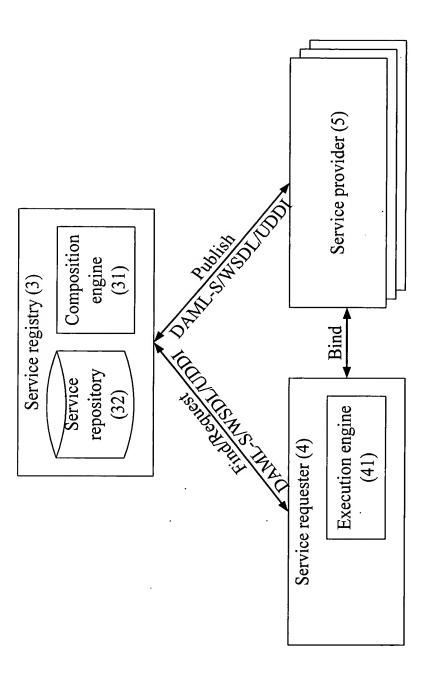


FIG. 3

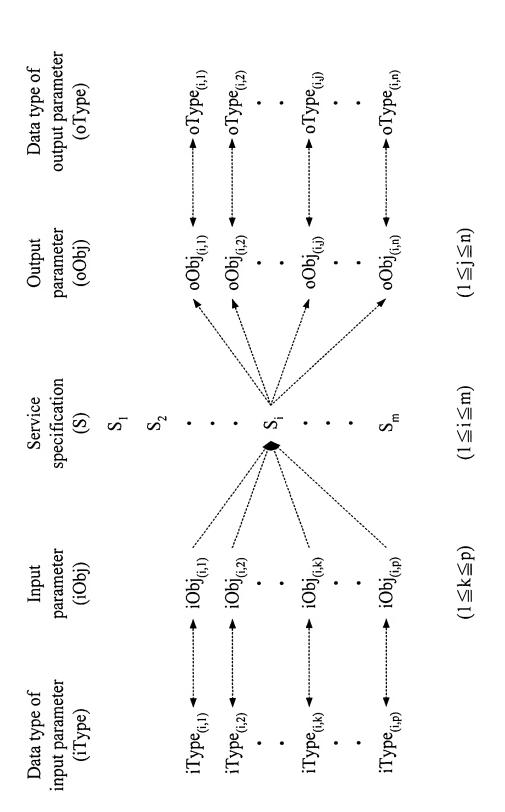


FIG. 4

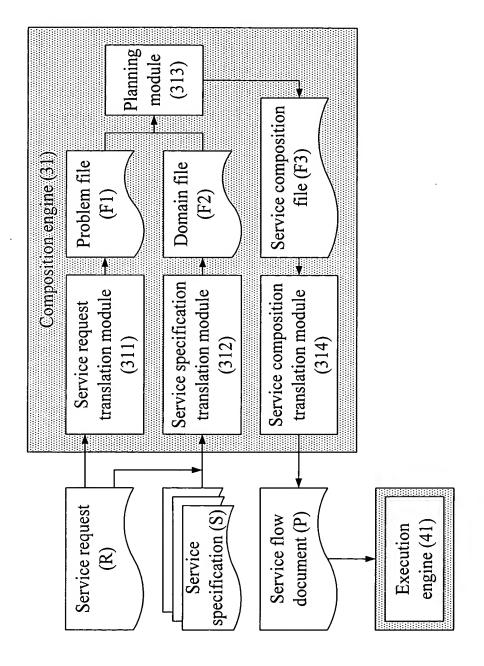


FIG.

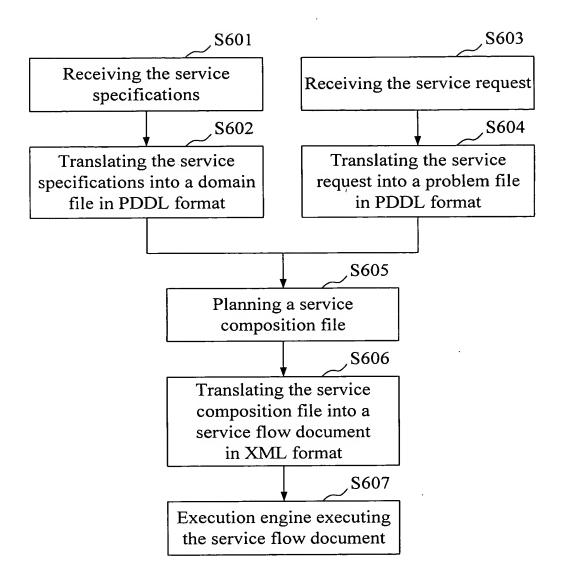


FIG. 6

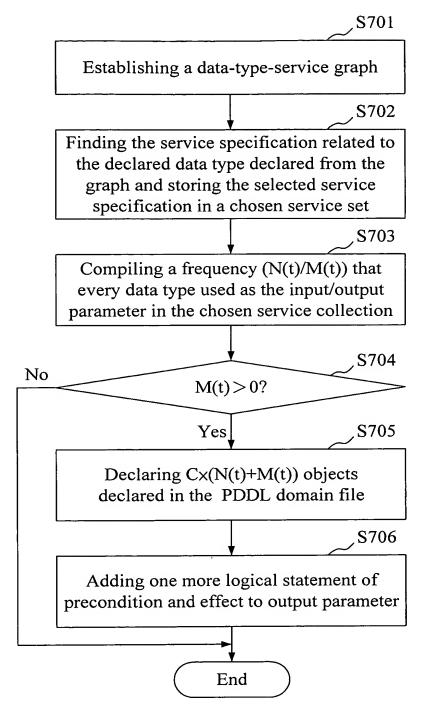


FIG. 7

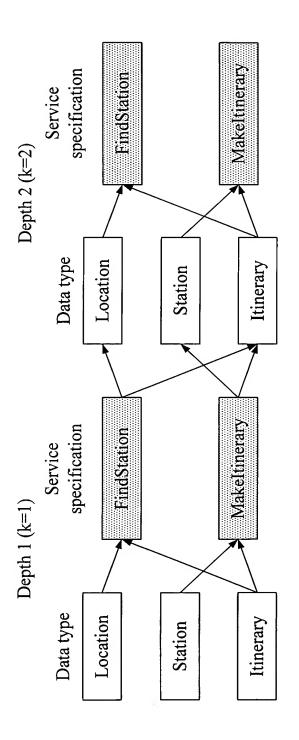


FIG. 8

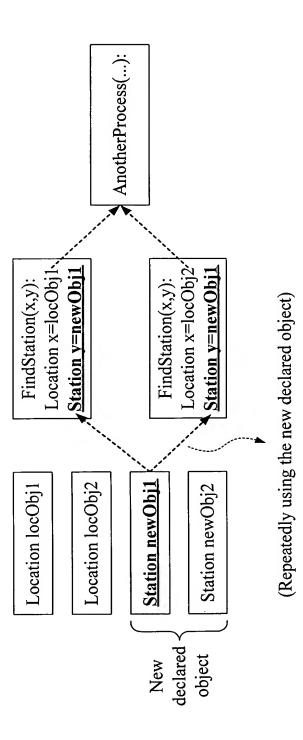


FIG. 9

PDDL problem file program code

FIG. 10

PDDL domain file program code

```
(define (domain iTour)
       (:requirements :strips :equality :typing)
       (:predicates
               (Start ?loc - Location)
                       ?loc - Location)
               (End
                               ?station - Station
               (At
                               ?loc - Location)
                       ?i - Itinerary
               (Trip
                               ?loc1 ?loc2 - Location)
        )
       (:action AskStation
                               (?loc - Location
               :parameters
                                  ?station - Station)
                               (At ?station ?loc))
               :effect (and
        )
        (:action MakeItinerary
                               (?loc1 ?loc2 - Location
               :parameters
                                  ?station1 ?station2 - Station
                                  ?i - Itinerary)
                                      (Start ?loc1)
               :precondition (and
                                              (End ?loc2)
                                              (At ?station1 ?loc1)
                                              (At ?station2 ?loc2))
               :effect (and
                               (Trip ?i ?loc1 ?loc2))
        )
)
```

PDDL domain file program code

```
(define (domain iTour)
        (:requirements :strips :equality :typing)
        (:predicates
                         ?loc - Location)
                (Start
                (End
                         ?loc - Location)
                                 ?station - Station
                (At
                                 ?loc - Location)
                         ?i - Itinerary
                (Trip
                                  ?loc1 ?loc2 - Location)
                         ?o - Object)
                (used
        )
        (:constants newStationObj1 newStationObj2 newStationObj3 - Station
                                 newItineraryObj - Itinerary)
        (:action AskStation
                                 (?loc - Location
                 :parameters
                                     ?station - Station)
                 :precondition (and (not (used ?station)))
                 :effect (and
                                 (At ?station ?loc)
                                                           (used ?station)
                                          )
        )
        (:action MakeItinerary
                                  (?loc1 ?loc2 - Location
                 :parameters
                                     ?station1 ?station2 - Station
                                     ?i - Itinerary)
                 :precondition (and
                                          (Start ?loc1)
                                                  (End ?loc2)
                                                  (At ?station1 ?loc1)
                                                  (At ?station2 ?loc2)
                                                  (not (used ?i))
                 :effect (
                                                  (Trip ?i ?loc1 ?loc2)
                                          and
                                                  (used ?i)
                                  )
        )
)
```

FIG. 12